

DPX 4 / Fredia User Guide



AO302471 Revision 3

Preface

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DPX 4 / Fredia User Guide
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Chapter 1 – Using this Guide









This section includes the following topics:

- Navigating this guide in Acrobat Reader, page 1.
- Warnings and notes, page 2.
- Printing this guide, page 2.

Note The instructions in this section are for Acrobat Reader v7.0.

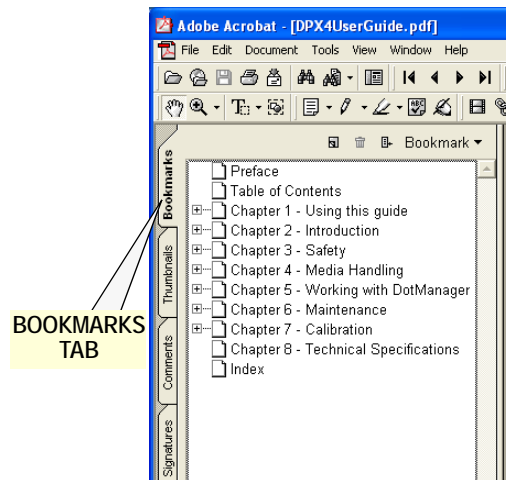
Navigating this guide in Acrobat Reader


If you are using Acrobat Reader to view this guide, we recommend you use the following Acrobat navigation buttons:

-  Go to the first page of the guide
-  Go back one page
-  Go forward one page
-  Go to the last page of the guide
-  Go back to previous view
-  Go forward to next view
-  Fit whole page in window
-  Close bookmarks

Bookmarks

You can use the Bookmarks window to quickly navigate to a specific chapter or section of this manual. If the bookmarks are not visible, click on the **Bookmarks** tab (see below) to display them:



Click on a link to move to the relevant chapter. Click on a  link to view the sub-sections within a chapter.

Using hot links

You can use Acrobat Reader's 'hot links' to move quickly to the section you want (when you place the mouse cursor over a hot link it turns into a hand icon).

There are three types of hot link:

- On the Contents page: click on the entry to take you to the relevant section.

- Cross references: you will find these throughout the manual, for example, refer to “*Printing this guide*” on page 1.2 for instructions. Click on the section reference to take you to the relevant page.
- On the Index page: click on the index entry to take you to the relevant page.

Warnings and notes

Warnings

The warnings in this manual are intended to protect you from injury and/or to protect the DPX 4 engine and your plates from damage. Read all warnings carefully and follow any instructions they include.

Warnings appear in **bold print**, like this:

WARNING: When working with the DPX 4 system you must protect yourself from injury and protect the DPX 4 engine from damage.

Notes

The notes in this manual give additional information on using the DPX 4 system.

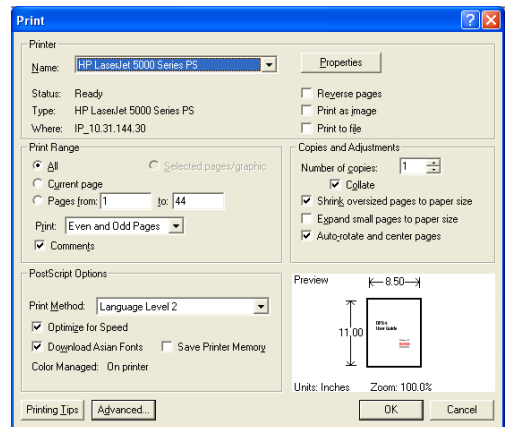
Notes appear in *italics*, like this:

Note The instructions in this manual are for the DPX 4 system.

Printing this guide

To print this guide:

1. In Acrobat Reader select **Print...** from the **File** menu. A dialog similar to the one shown below appears:



2. Select the required printer from the **Name** pull-down menu.
3. Click on the **Properties** button and select the **Portrait** orientation on the **Layout** tab.
4. Click on **OK** to return to the Print dialog.
5. Set the other options, such as the page range, then click on **OK** to print this guide (or the specified pages).

Chapter 2 – Safety

General

Although every precaution has been made to produce a safe product, we strongly recommend you comply with the following.

- The equipment must be properly grounded when connected to electrical outlets.
- Turn off power:
 - before connecting or disconnecting cables, and
 - before carrying out maintenance or adjustment operations.
- Do not remove covers or shielding.
- Do not install/use the equipment close to inflammable gases and vapors.
- Do not make any unauthorized modifications of the equipment.
- Wear protective gloves when handling chemistry and avoid spilling the fluids.
- Always check that the actual media width in Media Management corresponds to the actual media being used.
- The spinner in the platesetter cannot be started in an ambient temperature of less than 15 degrees Celsius.
- The equipment must be protected by a circuit breaker appropriately rated for the machine.

Laser

This system is classified as a Class one (I) laser product that contains a Class 3B (IIIb) laser system. This classification means that the operator is exposed to no hazardous laser light during operation and maintenance. The laser itself, however, is a Class 3B (IIIb) laser device, and it emits visible laser light which is considered hazardous by FDA published limits.

When the panels are removed, an interlock system automatically switches off the laser and optics unit to insure against the risk of radiation.

IMPORTANT WARNING: Modifications to the machine or performance of procedures other than those specified in this guide may result in hazardous laser light exposure.

Regulatory Information

Electromagnetic Emissions

DOC- Canada

The Canadian Department of Communications requires compliance with the Radio Interference Regulations, ICES -003.

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

EMC Directive - Europe

Complies with EN 55011: 1998

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

FCC - USA

The standards for electromagnetic emissions are Part 15, Subpart J of the FCC rules. The system was tested to Class A limits. The following statements are required by the FCC:

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio

frequency energy and, if not installed and used in accordance with the instruction guide, may cause harmful interference to radio communications.





Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his or her own expense.








Compliance with applicable regulations depends on the use of shielded cables, which the user may be responsible for procuring. Identification and Certification Label (ratings plate)


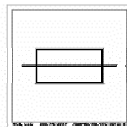
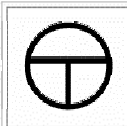

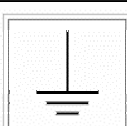


The identification and certification label shown below is attached to the cover of the platesetter unit, near the power entry receptacle.

Safety Labels

A variety of safety labels are located throughout the DPX 4 to alert users and service personnel to potentially hazardous areas of the machine. The safety labels are shown and explained on the next two pages.

ECRM Incorporated 554 Clark Road Tewksbury, MA, USA			
MODEL NUMBER: SERIAL NUMBER: MANUFACTURED: RATING:	CLASS 1 LASER PRODUCT This product conforms to all applicable provisions of Federal Regulations 21 CFR Chapter 1, Subchapter J, Section 1040.10. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation. This Class A digital apparatus complies with Canadian ICES-003		
	ATTENTION: Refer to the user guide for safe operation of this product		
			

Symbol	Use
	Laser Hazard, interlocked: Identifies interlocks used for laser safety. Hazardous laser radiation may be present when interlocks are defeated.
	Laser Hazard, general: Identifies areas of machine where hazardous laser radiation may be present when interlocks are defeated.
	Pinch/shear hazard: Identifies areas with moving mechanical parts where a pinch or shear hazard exists. Avoid contact with these areas when machine is in operation.
	Entanglement hazard: Identifies areas with moving mechanical parts where an entanglement hazard exists. Avoid contact with these areas when machine is in operation.
	Electrical Hazard: High voltage is present behind panels marked with this symbol. These panels should only be removed by trained service personnel.
	Hot surface warning: Panels marked with this symbol and components behind these panels may be hot. Observe caution when working in these areas.
	Attention symbol: Refer to the appropriate section of the User Guide for safe operation in this area.

Symbol	Use
	Processor chemistry warning.
	Fuse identification: Fuses must be replaced by components with identical voltage and current ratings.
	Momentary switch: Used to identify switches that are activated only when pressed.
	Protective earth: Identifies the point where protective earth is attached to the machine chassis. Protective earth should only be disconnected by trained service personnel.
	Chassis ground: Identifies attachment points for chassis ground for electrical safety. These attachments must be maintained for safe operation of the product.
	Rotational hazard: Wait 20 seconds before access to any area marked with this symbol.
	Certification label: Identifies machine model number, serial number and date of manufacture. Also identifies the operating voltage, frequency, current, user replaceable fuse (if equipped) and certifications.

Chapter 3 – Introduction

General

This section describes:

- Advanced Internal Drum Design, page 7
- Media Load System, page 8
- Knife and Punch System, page 8
- The Laser and Spinner System, page 8
- Optical System, page 8
- Integrated Processor and Dryer, page 8
- Easy Maintenance and Monitoring of the Processor, page 9
- Work, page 9

The DPX 4 is a Computer-to-Polyester Plate System that produces imaged, punched, dried and cut-to-size press-ready plates. The DPX 4 foot print is only 1370 x 1060 mm / 53.9" x 41.73".



Advanced Internal Drum Design



The DPX 4 uses an extruded aluminum drum to achieve extremely high precision and accuracy.

Power Switch

The main power switch for the DPX 4 platesetter is located on the back panel, as shown below.



Media Load System



DPX 4 has a twin-compartment media load system. An auto-centering system ensures precise centering of new media on the shaft every time a new roll is loaded. During operation, the media is automatically advanced onto the drum where it is held in place by a vacuum system during exposure.

The two media compartments permit the DPX 4 to simultaneously hold two different media sizes.

Knife and Punch System

The plate material is punched by a built-in punch system, exposed, and cut to size. This gives a precise and even registration from plate to plate and ensures minimum mounting time and easy registering of the plate on the press. The DPX 4 comes with a Bacher 425 mm punch as standard. It can be field upgraded with a Bacher 220 mm as well as Komori 550 mm custom punch.

The Laser and Spinner System

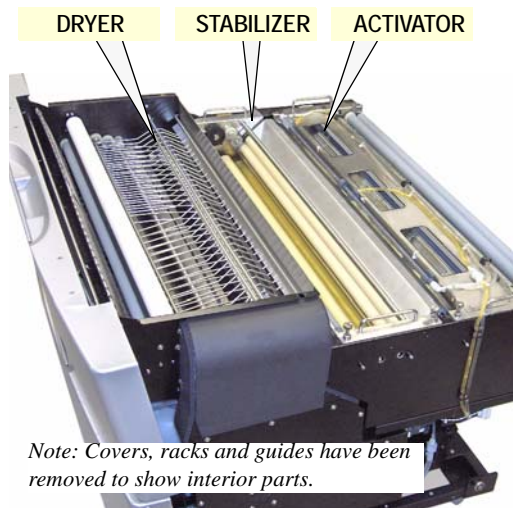
The DPX 4 uses fiber optic cables to transmit the dot directly into the optics and high-speed spinner.

Optical System

The optical system supports resolutions from 1000 to 3000 dpi in steps that insure the correct spot size and laser intensity for the selected resolution, as well as automatic focus which ensures the optimized spot on the plate producing high quality four color print.

Integrated Processor and Dryer

The built-in processor includes an activator unit, a stabilizer unit, and a dryer. There is a temperature control for the activator tank. Both tanks have sensors for controlling the chemistry level and



Note: Covers, racks and guides have been removed to show interior parts.

active replenishment to ensure the correct level of new chemistry in the tanks and to achieve precise activation of the polyester plate.

A 30-liter waste container collects excess chemistry and alerts the user when full. A drain pump provides for emptying the waste container without draining the chemistry.

integrated operation with the ECRM WorkMates work program. The interface between the DPX 4 and the RIP PC operates via a USB-2.0 port.

Easy Maintenance and Monitoring of the Processor



The processor is mounted on wheels. A guide allows it to be rolled out easily for maintenance or chemistry replenishment.

The DotManager program controls and monitors the processor and displays real-time processor status information on the PC monitor.

Work

The DPX 4 is controlled by a Win2000 or WinXP-based RIP platform. The DotManager program controls the media and the processor and

Chapter 4 – Media Handling

Media Load System

The DPX 4 has a twin-compartment media load system that accommodates two plate sizes.

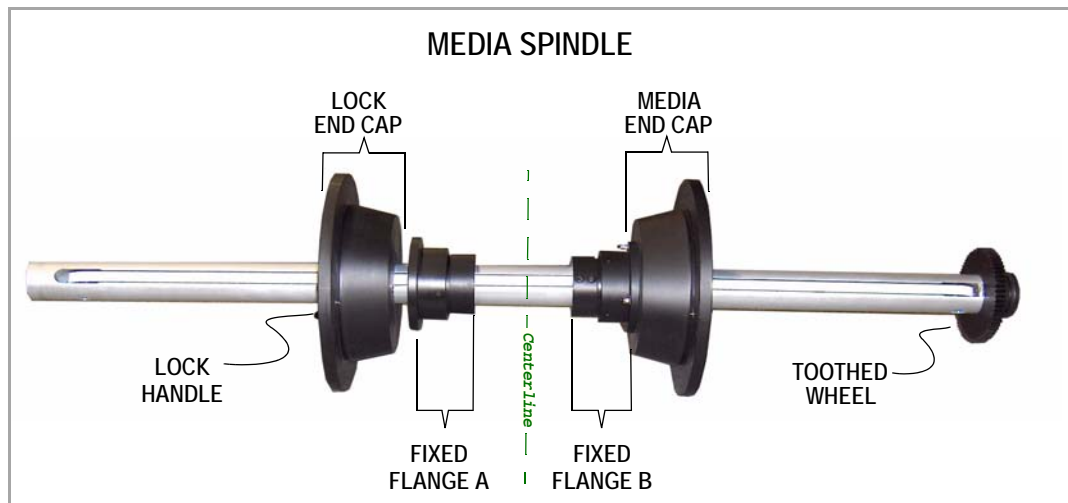
Each compartment includes an auto-centering media spindle (see below). Its mechanism ensures precise centering of the media on the shaft every time a new roll is loaded.

During operation the media is automatically advanced, positioned in the drum, and held in place by a unique vacuum system during exposure.

Inserting and Mounting Media

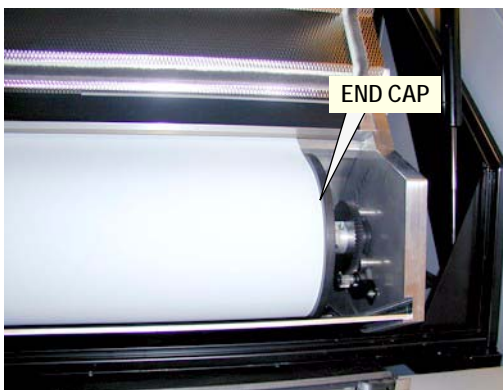
Removing the Media Roll

1. Make sure the media is unloaded (**Unload** button on DotManager's Control Windows).
2. Lift up the top cover (see figure at right).





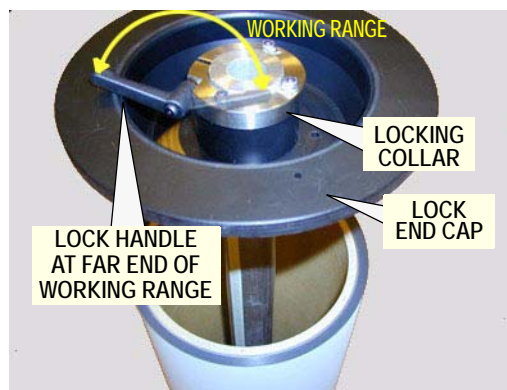
3. Lift the upper or (in this case) lower light protection cover.



4. Gently lift the media roll out of its compartment by the end caps.



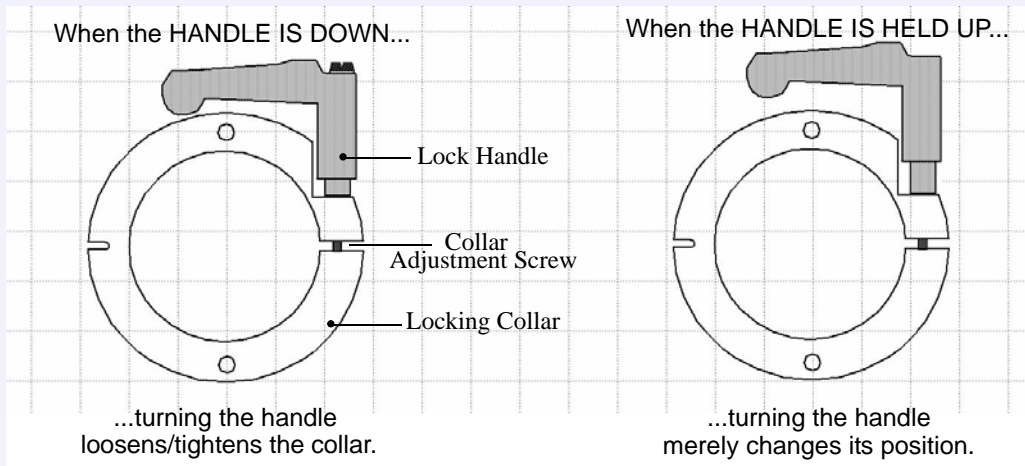
5. Place the media roll vertically on the floor and move the lock handle from the home position shown above to the end of the working range shown below.



6. Set one foot on the media end cap and pull the locking collar and the lock end cap off the shaft.
7. Lift the media roll off the shaft.

USING THE LOCK HANDLE

The lock handle is a spring-loaded wrench. When the handle is **down**, turning the handle loosens or tightens the collar, depending on the direction of the turn. When the handle is held **up**, turning the handle changes its position *but does not loosen or tighten the collar*.



Here's how to use the lock handle to remove the locking collar.

1. Turn the lock handle from home position to the end of its working range. (See illustrations on the preceding page.)
 2. Try to slide the locking collar off the shaft. If it won't slide off:
 - Lift up the locking handle. This releases its grip on the collar adjustment screw.
 - Keeping the handle raised, move it to the beginning of the working range shown on the preceding page.
 - Release the handle so that it springs back down. This restores handle's grip on the collar adjustment screw.
 3. Turn the handle approximately 180°, to the end of its working range (see figure on preceding page).
 4. Repeat steps 2 and 3 until you can slide the collar off the shaft.
- Reverse the actions described above to replace the locking collar.

Mounting a New Media Roll

1. Slide the media onto the shaft and make sure it fits tightly against the media end cap.
2. Push the lock end cap onto the shaft. Note that the media roll is automatically centered on the shaft.
3. Slide the locking collar onto the media shaft and then up against the lock end cap.
4. Lock the collar in place. Refer to the *Using the Lock Handle* on the preceding page.
5. Place the shaft with the media roll in the compartment.

6. Carefully remove the tape from the media and advance the roll towards the input edge.

Note Be sure to completely remove all the tape from the new media roll. Tape or tape remnants left on the media could damage the inside of the drum in time.

7. Press the **Preload** button to advance the media.
8. Close the light protection cover.



Chapter 5 – Working with DotManager

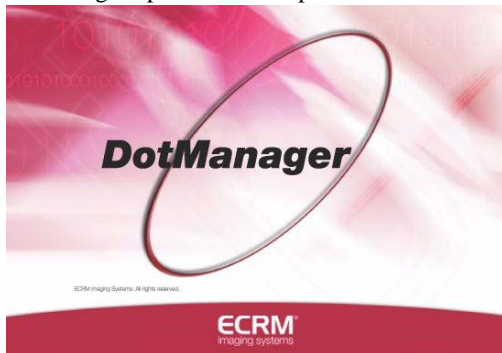
General

DotManager is the user interface for the DPX 4. It runs as a separate application on the RIP PC and communicates with the platesetter through a USB interface.

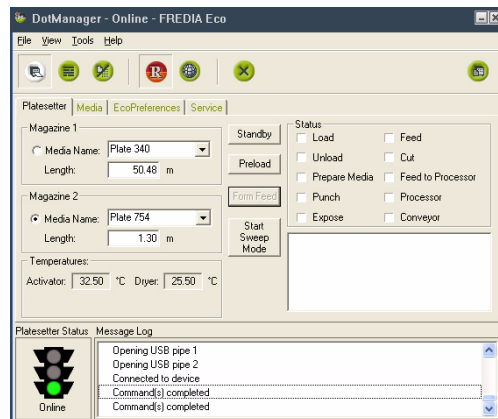
Note The DPX 4 does not have a control panel. The user communicates with the machine through the DotManager program. DotManager is installed with the RIP, from the CD.

The DotManager interacts with the RIPMate RIP by providing license management for the ECRM specific options, starting/stopping the RIP, and providing device services.

DotManager opens with the splash screen below.



The splash screen remains for a few seconds, then switches to the main screen shown in the next figure.



In this section:

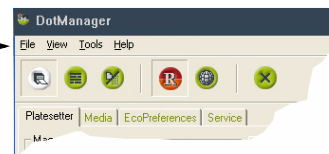
- Menus, page 15
- Buttons, page 16
- Windows, page 17

Menus

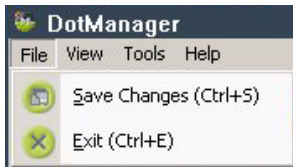
DotManager has four pull-down menus:

- File menu
- View menu
- Tools menu
- Help menu

PULL-DOWN
MENUS



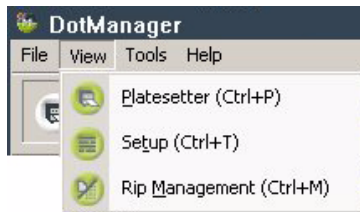
File menu



Save Changes: Click to save any changes made to the current setup.

Exit: Click to exit the DotManager application.

View menu



Platesetter: Click to view Platesetter tab

Setup: Click to view Setup tab

Rip Management: Click to view Rip Management tab.

Tools menu

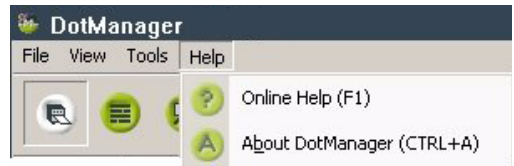


Start RIPMate: Click to start the RIPMate application (or WorkMates Admin, if PrintMate is installed).

Stop RIPMate: Click to stop the RIPMate application (or WorkMates Admin, if PrintMate is installed).

Start Hyperterminal: Click to start the hyperterminal communication application used for debugging purposes.

Help menu

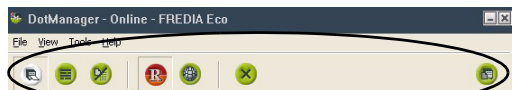


Online Help: Click to view the Online Help on-screen.








About DotManager: Opens a window displaying the current version of DotManager.

Buttons

Additionally, DotManager has seven buttons for accessing various control and set-up windows, starting/stopping RIPMate (or WorkMates Admin, if WorkMates is installed), starting the Hyperterminal, quitting DotManager, and saving changes (left to right):



BUTTONS

DotManager buttons	
	access the Control Windows
	access the Setup Window
	access the RIP Management Windows
	start/stop the RIPMate application (or WorkMates Admin, if PrintMate is installed)
	start the Hyperterminal communication application
	exit the DotManager application
	save changes

Windows

DotManager has different windows for setting up and controlling the platesetter. The windows fall into three basic categories:

- Control Windows, page 17
- Setup Window, page 21
- RIP Management Windows, page 22

Note In this section, all the examples and screen views use metric measurement units. The measurement unit can be changed to imperial units on the Setup tab.

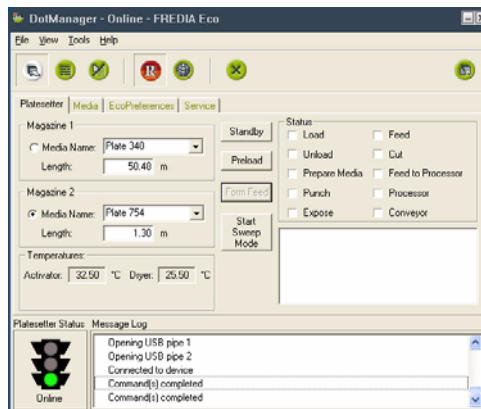
Control Windows

These windows are used to set up and control the platesetter's basic operation. To open a window, first click on the *access the Control Windows* button, and then click on the tab for the window you want to open.

- Platesetter Tab, page 17
- Media Tab, page 19
- Service Tab, page 19
- EcoPreferences Tab, page 20

Platesetter Tab

The Platesetter Tab pertains to the primary functions of the platesetter.



Magazine 1 and Magazine 2: These sections display the available media compartment(s). If your platesetter is not equipped with the extra optional compartment, Magazine 2 compartment will be greyed.

Preload/Unload: When a media roll has been inserted in the media compartment, click the **Preload** button to advance the media into the feed system. When the media is loaded, the button text changes to **Unload**, and the button is then used for pulling the media out of the feed system, e.g. in case of replacement.

Form Feed: Click the **Form Feed** button to advance the media 68 cm (maximum exposable film length).

Start/Stop Sweep Mode: Click this toggle button to activate or deactivate the Exposure Sweep mode. The Exposure Sweep Mode provides for multiple RIP jobs to be exposed on one plate. The plate-setter automatically feeds the plate out, when it is full, or when the RIP does not supply new jobs within 15 seconds from the last completed job. See also Calibration in the RIPMate User Manual.

Activate/Standby: Toggles the system's operating mode. Click Standby to switch the platesetter to an energy-saving "shut down" mode that turns off motors, pumps and other electrical devices.

Notes

1. *The processor automatically flushes the activator coater and cleans the activator remover mechanism before shutting down. If the Auxiliary Thermal Control hardware is installed, the processor turns on the drum heater and stabilizer heater as necessary to bring the internal temperature up to 18° C.*
2. *The processor automatically flushes the activator coater at time 0:00 (i.e., when the processor's clock turns over to start a new 24-hour cycle).*
3. *If the Auxiliary Thermal Control hardware is installed, the processor turns on the drum heater if the internal temperature is less than 18° C.*

Click Activate to switch the platesetter back to a normal operating mode.

Status: The Status section includes a number of status lamps for **Load, Unload, Prepare Media, Punch, Expose, Feed, Cut, Feed to Processor, Processor,** and **Conveyor** activities in the processor. Some signals from the lamps are accompanied by an additional message in the activity window below the lamps.

Temperatures: Displays the current temperature of the Activator and the Dryer. Also, displays the stabilizer temperature if the Auxiliary Thermal Control hardware is installed.

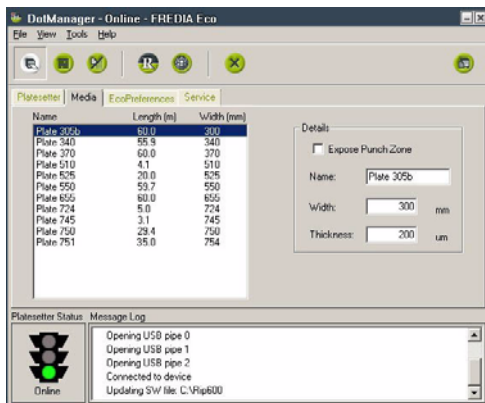
Platesetter Status: The traffic light indicates the current state of the platesetter at all times and responds to the color indicators in the **Status** section.

- **Red:** Error
- **Orange:** Warning
- **Green:** OK

Message Log: The Message Log window next to the traffic light displays general messages relating to the data connection between the DotManager and the platesetter.

Media Tab

The Media window displays a list of cassettes with information about what media type is loaded in the cassette, length of remaining media, and media thickness.



It is possible to create new cassettes and edit existing cassettes.

Media Drop Down list: Displays the list of media configured for the platesetter. Maximum 16 different media can be configured.

Name: Enter a name for the new media as you want it to appear in the drop down list.

Width: Enter the width (mm) of the new media.

Thickness: Enter the thickness (mm) of the new media.

Expose Punch Zone: Click the check box to choose to use the punch zone for exposure. (The quality of exposure in this area cannot be guaranteed.)

To change a media setup:

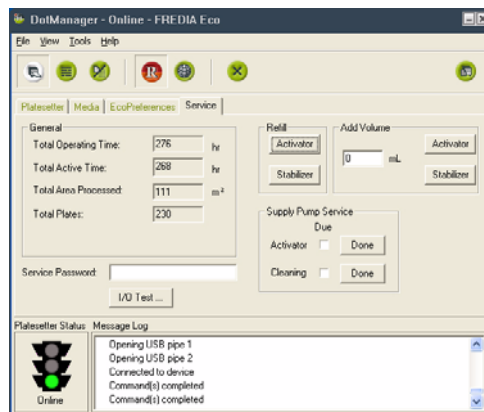
1. Select the correct media in the drop down list.

2. Change the appropriate settings.

3. Click the **Save** button.

Service Tab

The Service window displays some general info about the platesetter usage, tools to manage the activator and stabilizer pumps.



The I/O test window is started from the Service window.

General

The General section displays some common statistics about the platesetter utilization. All these parameters are lifetime information of the plate-setter.

Total Operating Time: Displays the total number of hours with power on.

Total Area processed: Displays the total number of hours activated (not counting standby time).

Total Black Area Processed: Displays the total number of square meters processed.

Total Plates: Displays the total number of plates processed.

Refill

Activator: Refill the activator rack until it is completely full.

Stabilizer: Refill the stabilizer rack until it is completely full.

Note These functions are performed automatically when the tank level is low.

Add Volume

Activator: Add the indicated volume to the activator rack.

Stabilizer: Add the indicated volume to the stabilizer rack.

I/O Test button

Opens the - service-password protected - I/O Test window.

This I/O Test window communicates with the relevant subsystems in the platesetter or processor and is meant for service personnel only.

Supply Pump Service

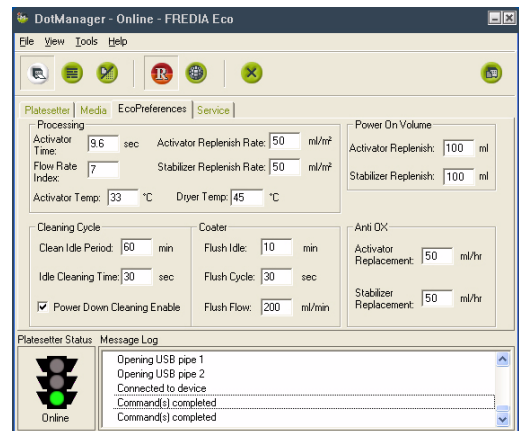
This section includes two indicators that turn red when it is time to replace the activator pump and/or the cleaning pump. (Every 25,000 plates for the activator pump; every 50,000 plates for the cleaning pump.) After you change either pump, press the “Done” button to reset the pump’s plate counter to zero. (0).

Note When pump service is required, you will be notified when you start of Dot Manager.

Pump replacement instructions are presented in “Replacing the In-line Activator Filter” on page 46

EcoPreferences Tab

The EcoPreferences window displays values that are derived directly from the platesetter processor.



Processing

Activator Time: Specifies the time (in seconds) the activator is applied to the media.

Activator Replenishment Rate: Specifies the volume of activator fluid that has to be replenished in milliliter per square meter of developed plate.

Stabilizer Replenishment Rate: Specifies the volume of stabilizer fluid that has to be replenished in milliliter per square meter of developed plate.

Dryer Temperature: Specifies the temperature of the dryer air in centigrade (°C).

Activator Temperature: Specifies the temperature of the activator fluid in centigrade (°C).

Flow Rate Index: *Sets the activator flow rate. The default setting is 7. The higher the setting number, the higher the flow rate.*

Anti Oxidant

Activator Replacement: Specifies the volume of activator fluid that has to be replenished in milliliter per hour beginning after the idle period.

Stabilizer Replacement: Specifies the volume of stabilizer fluid that has to be replenished in milliliter per hour beginning after the idle period.

Cleaning Cycle (for the Activator Remover)

The processor has a mechanism for removing excess activator from the plates. Activator residue that builds up on this mechanism hardens if it stays on the mechanism too long. To prevent this from happening, you can configure the processor to automatically clean the mechanism after remaining idle for a period of time.

Clean Idle Period: Sets the length of time the processor can remain idle before the cleaning is performed. The default setting is 60 minutes.

Note This cleaning is a one-time event. Once the mechanism is cleaned, the system will not perform a subsequent cleaning regardless of how long the processor remains idle.

Idle Cleaning Time: Sets the duration of the cleaning. The default setting is 30 seconds.

Power Down Cleaning Enable: Enables/disables cleaning of the activator remover mechanism on power-down.

Coater (Activator Coater)

The processor employs a mechanism for coating activator on the plates. Activator residue that builds up on this mechanism hardens if it stays on the mechanism too long. To prevent this from happening, you can configure the processor to automatically flush the mechanism clean at regular intervals.

Flush Idle: Sets the length of time between flushes. The default setting is 10 minutes.

Flush Cycle: Sets the duration of the flushing operation. The default setting is 30 seconds.

Flush Flow: Sets the activator flow rate for the flushing operation. The default setting is 200ml/m.

Power On Volume

At initial power up, the processor automatically replenishes the activator and stabilizer supplies. The following parameters provide for defining replenishment volumes

Activator Replenish: Defines the volume of the activator replenishment. The default setting is 100 ml.

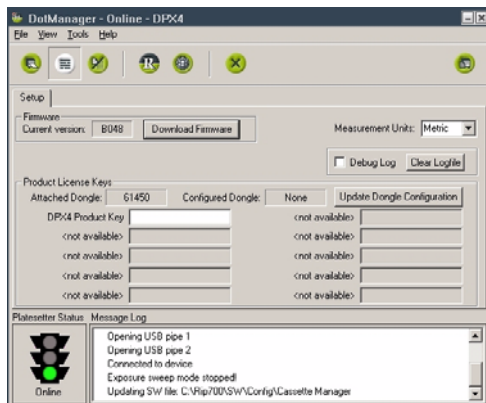
Stabilizer Replenish: Defines the volume of the stabilizer replenishment. The default setting is 100 ml.

Note Replenishment may or may not occur depending on whether the “Reduced Power-on cycle delay” period has elapsed.

Setup Window

The Setup window displays a series of platesetter related settings.

To open the window, first click on the *access the Setup Window* button.



The displays and dialogs are as follows.

Current Firmware version: Displays the current firmware version in the platesetter.

Download Firmware: Use this button to download or update the platesetter firmware to your platesetter. The program will guide you through the download process. (To update your platesetter firmware, first shut down RIPMate.)

Measurement Units: Click to open and choose between Metric and Imperial units.

Clear log: Click the button to delete the dotmanager.log-file.

Debug Log: Enable/disable a debug log: When debugging is enabled, DotManager will record all information about the communication with the platesetter and processor into a plain text file. This file can be consulted at \Ripxxx\DotManager.log.

Product License Keys

Attached Dongle: Serial number of the USB dongle plugged in the RIP PC.

Configured Dongle: Serial number of the USB dongle which is configured in the platesetter firmware.

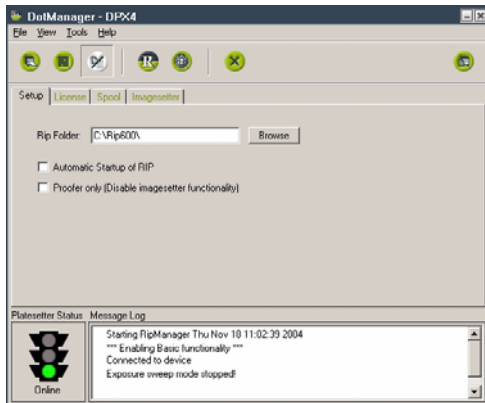
License Keys input fields: Enter the appropriate license key to activate certain extra (license protected) platesetter functions.

Update Dongle Configuration: After entering the license key(s) click the Update Dongle Configuration button to save the new license(s) in the platesetter firmware.

RIP Management Windows

The RIP Management windows are used to set up and control the platesetter's basic operation. To open a window, first click on the *access the RIP Management Windows* button, and then click on the tab for the control window you want to open.

- Setup Tab, page 23
- License Tab, page 23
- Spool Tab, page 24
- Imagesetter Tab, page 24



Setup Tab

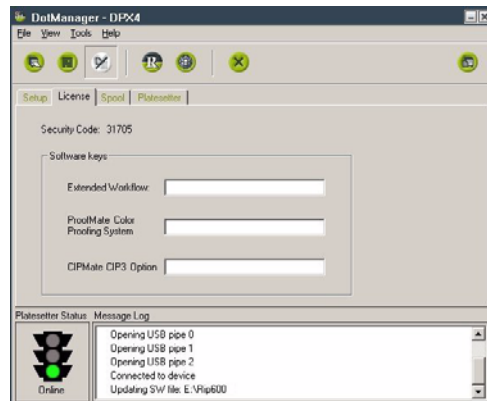
Rip Folder: DotManager needs to be able to find RIPMate on your hard disk, so that it can send instructions and launch RIPMate when it needs to. If you move RIPMate to a new folder, you must enter the new path in the Rip Folder directory field by either typing it directly or using the **Browse** button to find it.

Automatic startup of RIP: DotManager must run before RIPMate. This enables DotManager to establish communication with RIPMate and to control the media management features. Therefore, when you want to start running RIPMate, you must begin by running DotManager. For convenience, DotManager can start RIPMate automatically thereafter. To activate this feature, mark the **Automatic Startup of RIP** check box.

Proofer only (disable platesetter functionality): Disables the platesetter-only features of RIPMate so that you can use it simply to drive a proof printer. If you are using RIPMate only to drive a proof printer (possibly using the ProofMate option), then you should mark this check box to

prevent RIPMate from generating an error message when it does not find an platesetter attached to your computer.

License Tab



The License tab enables the ECRM specific WorkMates options by entering the appropriate password.

Note This tab is not available if WorkMates Administrator is installed.)

These options are:

Extended Workflow: The Extended Workflow option provides extra support for larger, multi-user installations. It adds RipSpool, a dedicated input plug-in.

Note For RIPMate 7.1 and higher this option is no longer license-protected.

ProofMate: The ProofMate proofing option lets you use any low- or high-end printer or plotter as a proofing device. The only thing you need is a standard Windows printer driver. With ProofMate, any of thousands of printers can be used for proofing at the cost of just one printer driver.

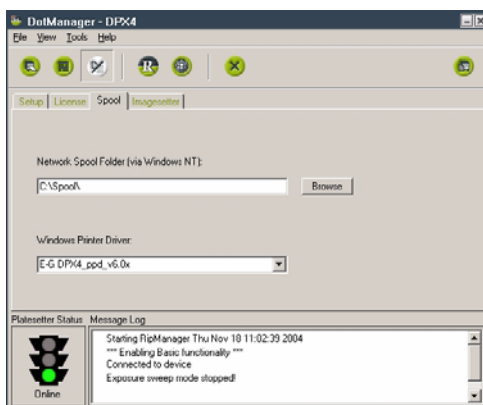
ProofMate allows simultaneous output to a proofer and to any other output device, such as an platesetter. While you are sending one job to the proofer, you can be sending another job to the platesetter, thus greatly improving your output productivity. ProofMate makes use of industry-standard ICC profiles to provide precise color reproduction and final press color emulation.

CIPMate: CIP3 files are used to link printing and post-printing processes closer to the prepress phase. With the CIPMate option, RIPMate generates CIP3 files on the fly as the platesetter is driven, using exactly the same screened data.

This means that the PostScript job only has to be processed once, compared with systems that use a separate output driver for CIP3. Thus, only half as much time is required, and the cost and inconvenience of maintaining a duplicate CIP3 setup for each platesetter setup is avoided.

Spool Tab

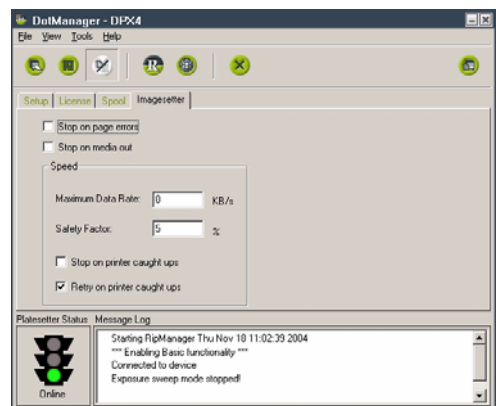
The Spool tab displays information about spooler settings.



Network Spool Folder: Enter the complete path for the folder to use for spooling, or use the **Browse**-button for locating the folder.

Windows Printer Driver: Click to open the drop-down list box and select the appropriate Windows printer driver installed on the RIP PC.

Imagesetter Tab



Stop on page errors: This check box determines how RIPMate will react to a page that contains errors, such as incorrect margins or corruption. If this check box is marked, all further output will be disabled from RIPMate until it is explicitly re-enabled via the check box in the RIPMate Output Controller/Monitor window.

If this check box is unmarked, all pages with errors will be moved to the **Held Queue** in the RIPMate Output Controller/Monitor window. Other jobs will continue to print.

Stop on media out: This check box applies only to platesetters that have more than one input cassette (like the DotMate 5000). It controls what RIPMate will do if one of the cassettes runs out of media.

If this check box is marked, all further output will be disabled from RIPMate until the cassette is refilled and output it is explicitly reenabled via the check box in the RIPMate Output Controller/Monitor window.

If this check box is unmarked, RIPMate will move all jobs requesting out-put to the empty cassette into the **Held Queue**. However, if the Smart Cassette check box is marked, RIPMate will output to the other cassette, provided it contains the correct media. Jobs requesting the other cassette will be processed as usual.

Maximum Data Rate: The first time you run RIPMate, this field will be set to zero. RIPMate will then test your system to find out how fast data can be sent to the platesetter. If you are having frequent problems with pages caught ups, you may need to set this field back to zero so that RIPMate can recalculate a reasonable rate. Otherwise, you should never change the value of this field.

Safety Factor: The safety factor forces RIPMate to assume communication will be slightly slower than the value found for **Maximum Data Rate**. A safety factor of 5% should be sufficient, but if recalculating the **Maximum Data Rate**, as suggested above, does not help reduce page caught ups, try to raise this value slightly.

Stop on printer caught ups: When the RIP is unable to provide the platesetter with data at the correct speed (due, for example, to excessive loads on the processor or network), the output will be interrupted. In this case, the platesetter must stop output.

This check box determines what RIPMate will do in the event of a caught up.

If this check box is marked, and the **Retry on printer caught ups** check box is unmarked, RIPMate will disable all further output each time a caught up occurs. Output will remain disabled, until it is re-enabled in RIPMate's Output Controller/Monitor window.

If this check box is marked, and the **Retry on printer caught ups** check box is also marked, RIPMate will try to resend the page at half speed. If it catches up again, RIPMate will try at one quarter speed. If it catches yet again, RIPMate disables all further output.

If this check box is unmarked, and the **Retry on printer caught ups** check box is unmarked, RIPMate will move the job into the **Held Queue**. Other jobs will print as usual.

If this check box is unmarked, and the **Retry on printer caught ups** check box is marked, RIPMate will retry at the two slower speeds, but if output is still not possible, the job will be moved into the **Held Queue**. Other jobs will print as usual.

Retry on printer caught ups: This check box controls whether or not RIPMate will try to output at a slower speed, if a caught up occurs at the usual speed. See the description for **Stop on printer caught ups** above for more information.

Chapter 6 – Calibration

Why Is Calibration Necessary?

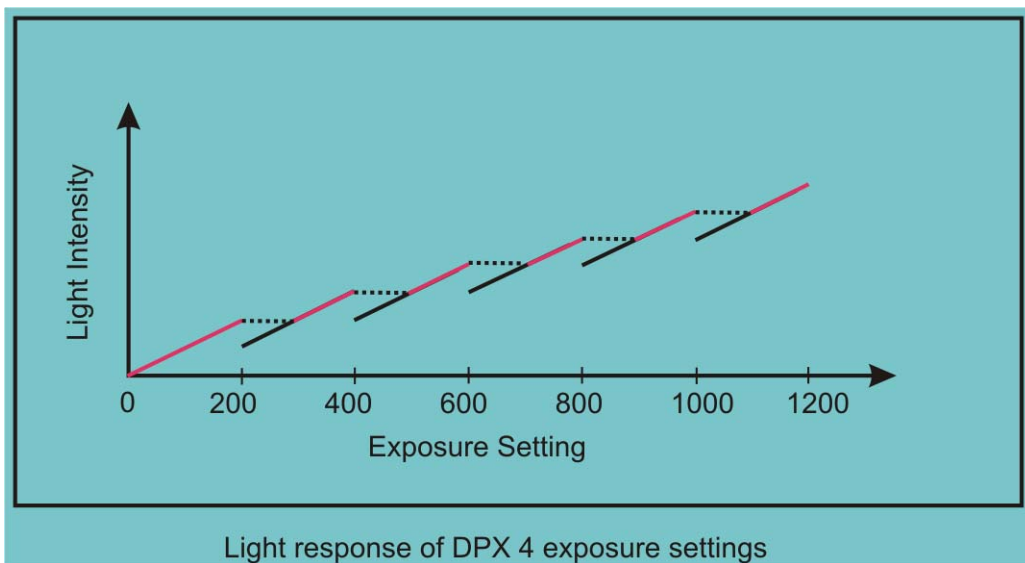
In order to compensate for dot gain and produce consistent output, a platesetter must be calibrated for linearity. A platesetter is “linear” when every tone specified in the input gives that same tone in the output, so that a curve comparing input and output is a straight line.

In four-color work, even small deviations from a linear curve can cause significant errors in the colors produced - for example, changes in color balance and contrast, loss of brightness, and loss of highlight or shadow detail. Even if the platesetter is very accurate, the output will still be affected by

the type and brand of media used, so calibration should be regularly checked.

Because of the way DPX 4 moderates its exposures, it is recommended that you sweep from 200 to 1200 at steps of 200. As illustrated below, the light intensity response is notched at intervals of 200, and to achieve optimum dynamic range you should use a setting near the top of one of the notches. By creating a sweep in steps of 200 that starts at 200, you will be testing at the top of each notch.

Calibration is described in the RIP user documentation.



Chapter 7 – Maintenance

General

You must keep the processor clean to obtain high-quality output.

As the media passes through chemistry, it inevitably leaves residue on the rollers in the processor racks. For that reason,

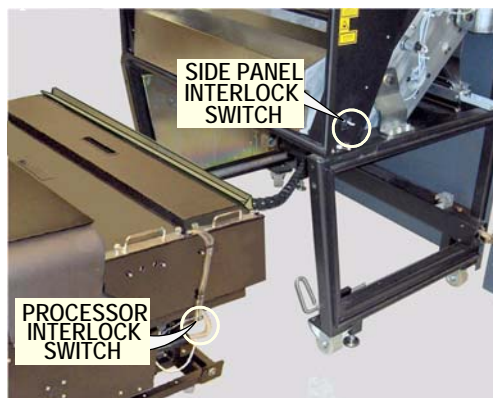
- any part of the processor unit which is passed by the media should be cleaned at least once a week, or at regular intervals,
- the processor should be cleaned at each change of chemistry,
- any chemical residue on the drain hose and hose coupling should be removed.

The punch waste container located behind the left-hand side door (see below) should be emptied at regular intervals. The transparent part of the container can be unscrewed by turning it counter-clockwise.



Opening the Processor Drawer and the Side Panels

Whenever the processor is drawer pulled out or a side panel is opened, the interlock system halts operations and switches off the laser and optics unit. When the drawer or side panel is closed, the laser and optics unit are turned back on, but the operations that were halted *may or may not* resume, depending on their state when they were halted.



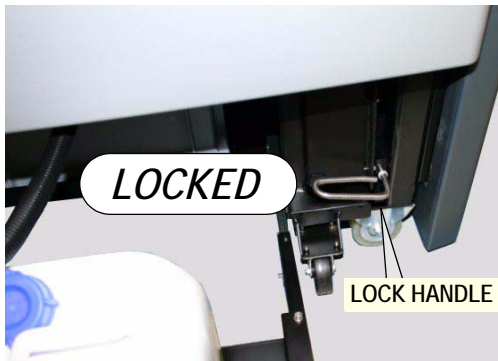
To ensure operations close and open in a orderly manner, **we recommend you power down the DPX 4 before pulling out the processor drawer or opening either side panel.**

Pulling out the Processor

1. Press on the area shown below to open the cover.



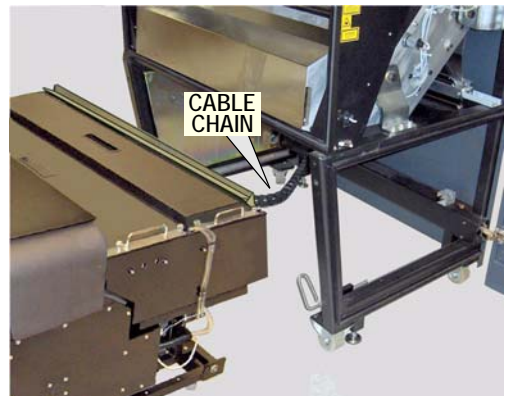
2. Pull out the cover and locate the processor lock handle, which is positioned horizontally when locked (see below).



3. To unlock the processor, turn the lock handle to vertical position as shown below.



4. Pull out the processor unit as far as permitted by the cable chain. Be careful to avoid spilling fluids.

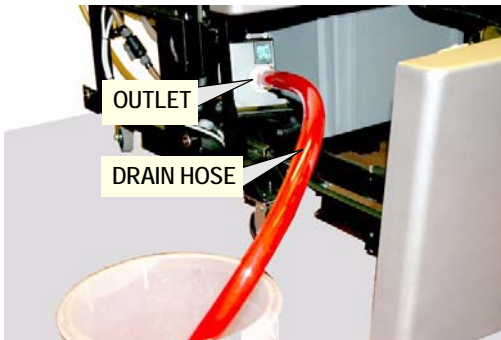


Note: The processor unit is supported by rails while in position and by wheels when pulled out.

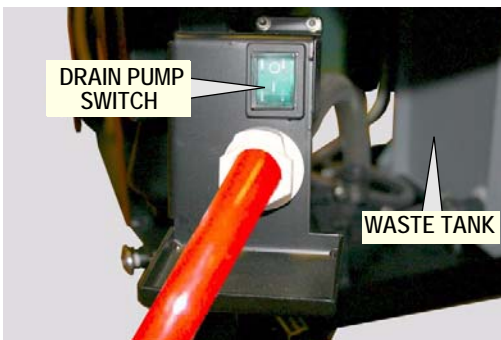
Draining the Processor

The chemistry must be drained from the waste, stabilizer, and activator tanks in order to clean the tanks or replace the chemistry.

1. **Pull out the processor** as explained on page 30 and locate the outlet shown below.



2. **Push the drain hose into the outlet** until it locks.
3. **Drain the waste tank.** Press and hold the drain pump switch to activate the waste pump. Release the switch when the waste tank is empty.



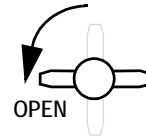
4. **Locate the activator and stabilizer tank drain valves** show below. (They are the left side of the processor.)
5. **Open both valves.** Turn both valves to the horizontal "OPEN" position, as shown below. The chemicals in the activator and stabilizer tanks will drain into the waste tank.



CLOSED



OPEN

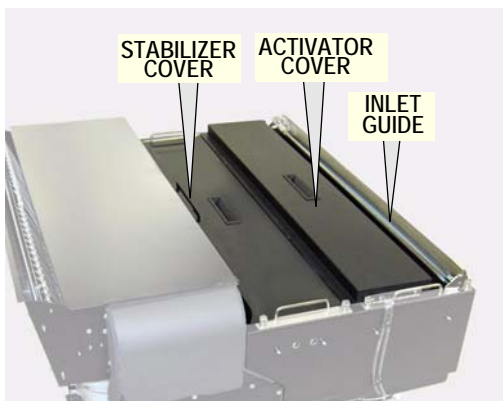


Note: You should clean the activator and stabilizer tanks prior to re-filling the chemistry. For details, refer to "Cleaning the Processor" on page 7.32

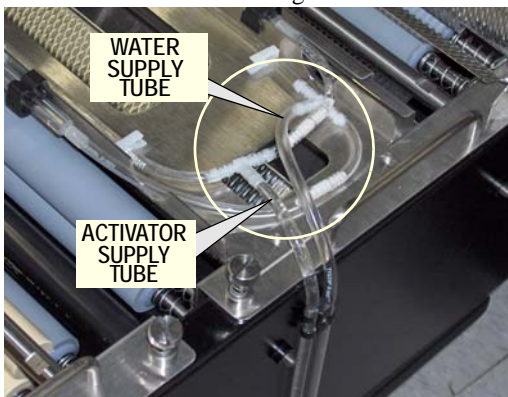
Cleaning the Processor

The processor should be cleaned every time the chemistry is changed. The procedure is as follows.

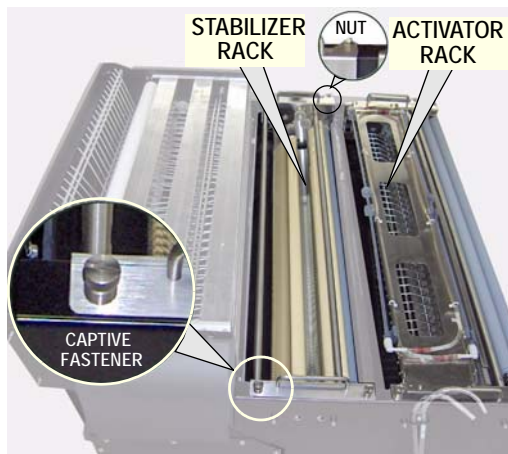
1. **Drain the processor** as explained on *page 31*
2. **Remove the rack covers.** Refer to the figure below. In order, remove:
(1) the inlet guide, (2) the activator cover, and
(3) the stabilizer cover.



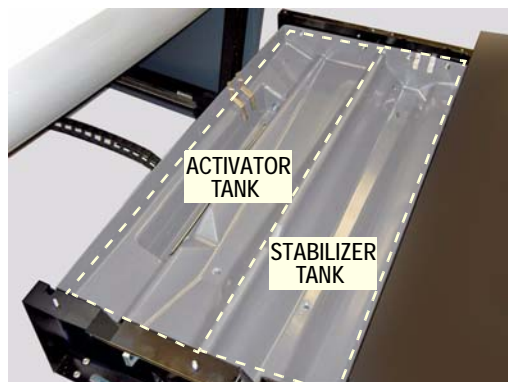
3. **Disconnect the two supply tubes** shown below from the tee fittings.



4. **Remove the nuts and loosen the captive fasteners** that secure the racks to the processor chassis (see below).



5. **Remove the racks.** Pull each one out by grasping the handles at either end of the rack and then pulling it straight up and out.
6. **Clean the activator and stabilizer tanks.** Pour clean water into the tanks, clean with Ph-neutral soap and a soft brush, and rinse with clean water.



7. **Let the water run off the rack** before putting it back in position.
8. **Finish by draining the cleaning water** from the waste tank.
9. **Remove any chemical residue on the drain hose and hose coupling.**
10. **Clean the rollers, racks and guides in the activator and stabilizer racks.** Clean with a soft brush and lukewarm water. Finish by rinsing the parts with clean water.

If you have a large wash sink at your disposal, you *can* just set the racks down in the sink and clean with the rollers, guides, and racks still in place in the rack.

However, to achieve optimal results, we recommend cleaning the activator and stabilizer racks as follows:

- **Remove all the rollers racks, and guides from the racks.**
- **Thoroughly clean and rinse the gear trains inside the racks.**
- **Thoroughly clean and rinse the individual rollers racks and guides outside the rack.**
- **Clean the activator supply pipe as explained in “The procedure for cleaning the activator supply pipe is as follows.” on page 7.43**
- **Place the cleaned parts back into place in the rack.**

The next four pages show the removable parts and how they are arranged in the activator and stabilizer racks. Instructions for replacing the removable parts follow the illustrations.

Filling the Processor Chemistry

1. **Clean the processor** as explained in the preceding section.
2. **Turn the drain valves to the vertical “CLOSED” position**, as shown below.



3. **Add new chemicals** - 1.3 liters of Activator, and 5.8 liters of Stabilizer.

IMPORTANT: Avoid splashing stabilizer into the activator tank. Even a small amount of stabilizer may damage the activator.

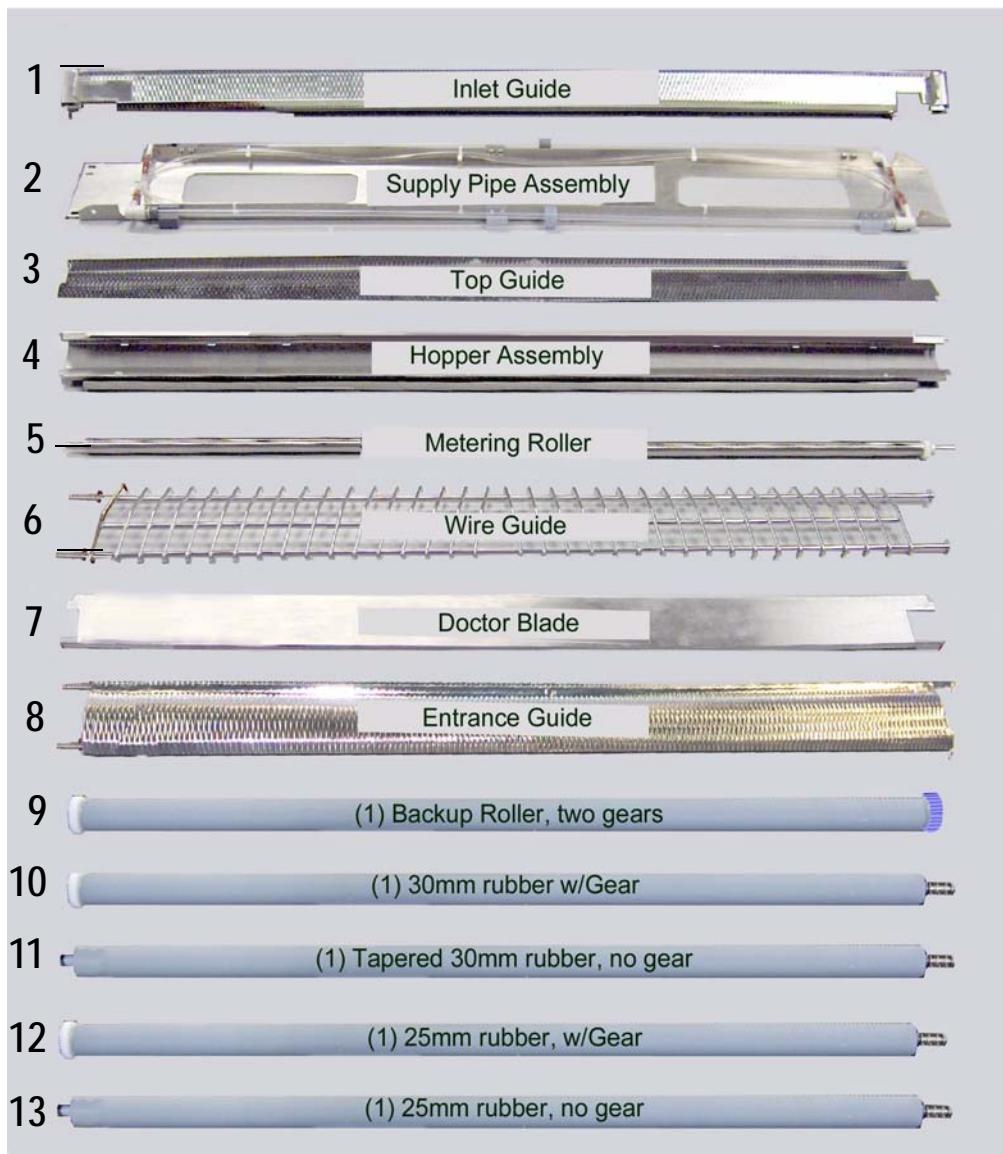
Note: To minimize chemistry waste, do not attempt to fill tanks to capacity. The processor will automatically refill the remaining required quantity upon power up.

4. **Replace the activator and stabilizer racks.**
5. **Replace rack covers and inlet guide.**
6. **Gently push the processor unit back into position.**
7. **Turn the processor lock handle to horizontal position** to lock the processor.

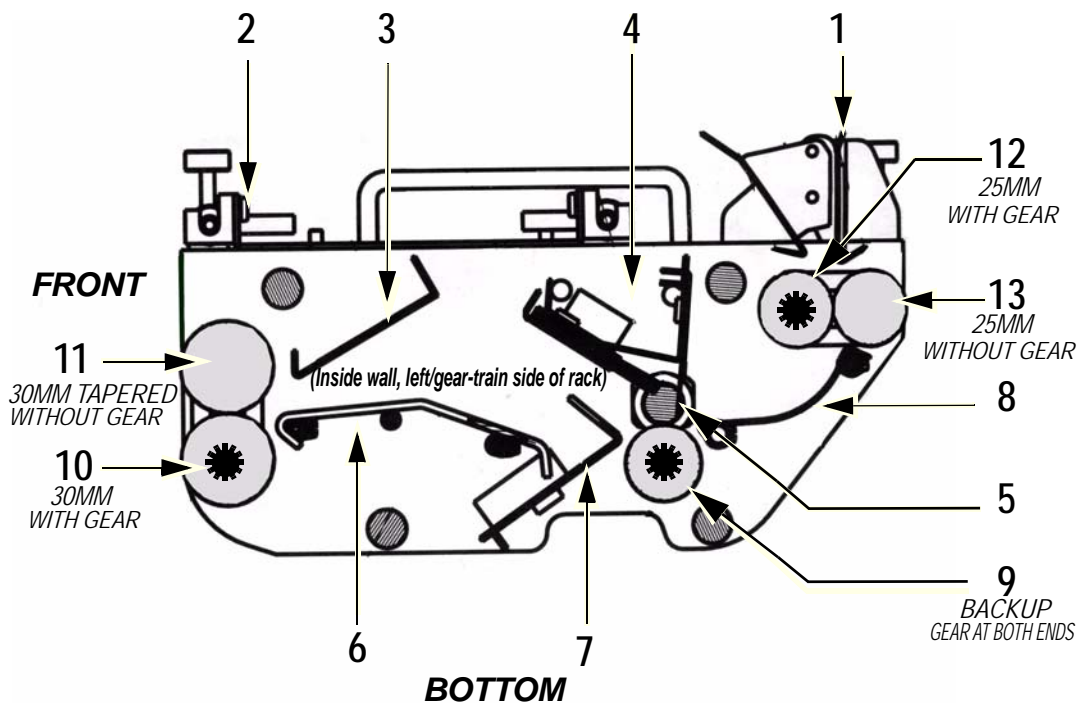
The activator temperature is regulated by means of a computer-controlled heating element and must be between 20° C (68°F) and 33°C (91°F).

WARNING: Never turn on the power unless the processor unit is filled or the power plug for the heating element is removed, as this may cause overheating and damage to the processor unit.

Removable Parts, Activator Rack



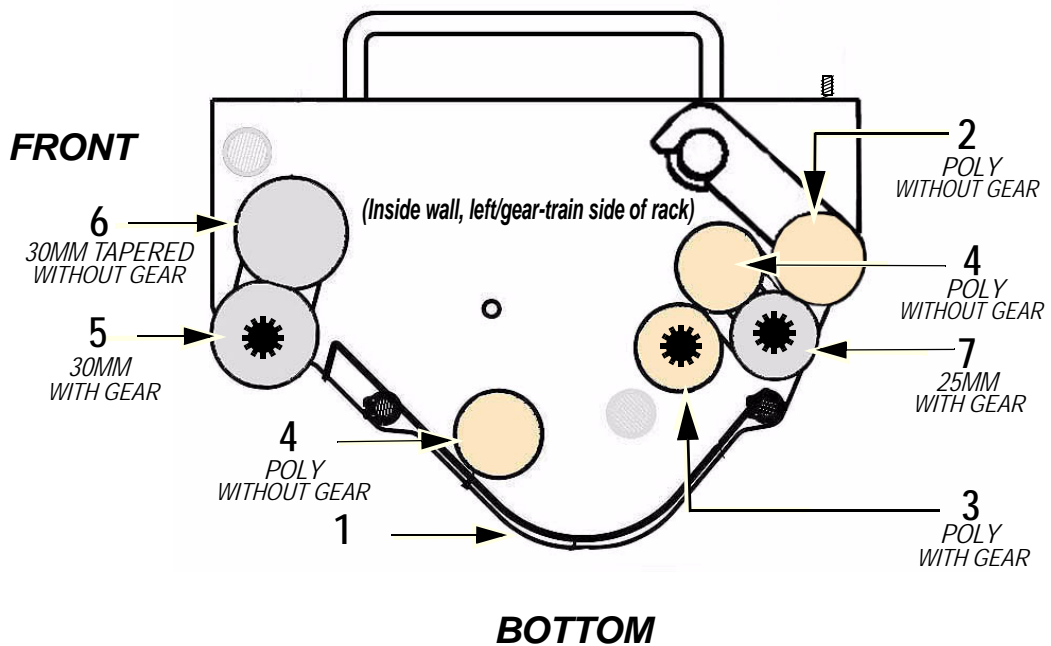
ACTIVATOR RACK



Removable Parts, Stabilizer Rack



STABILIZER RACK

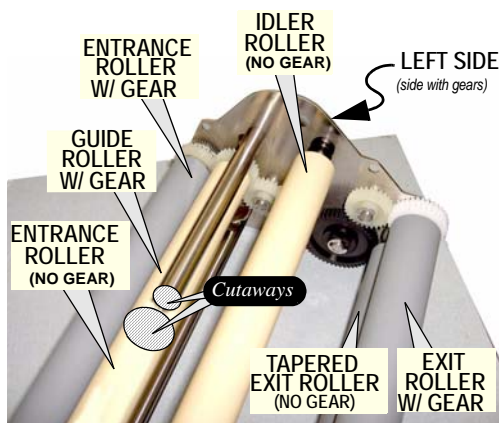


Installing the Stabilizer Rack Rollers and Bottom Guide

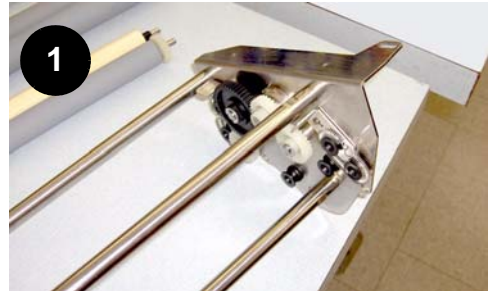
Steps for installing the rollers and guide are presented below. The same basic technique is used to install each roller and the guide.

- First, insert the spring-loaded end of the roller/guide into its bushing on **right** side of the rack.
- Next, compress the roller/guide into the bushing, align the opposite of the roller/guide with its bushing on the **left (gear train)** side of the rack.
- Finally, gradually relax compression to seat the roller/guide in the bushing.
- When you install a roller pair, use the pull lever to spread the rollers apart to get the gears to mesh.

The picture below shows how the 6 rollers look when in place with the rack turned upside down. The **GUIDE ROLLER W/GEAR** and the rod immediately above it have been cut away to clarify the view of the **ENTRANCE ROLLER**.



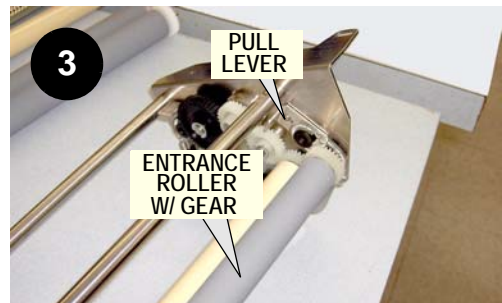
1. Lay the stabilizer rack on a table as shown below.



2. Install the **GUIDE ROLLER W/GEAR**. Mount the end with the spring first, and then end with the gear (see below).



3. Install the **ENTRANCE ROLLER W/GEAR** as shown below. You may need to retract the **PULL LEVER** to get the gears to engage.



4. Install the **ENTRANCE ROLLER WITHOUT GEAR** as shown below.



6. Install the **EXIT ROLLER W/GEAR** as shown below.



5. Turn the assembly over and then install the **TAPERED EXIT ROLLER** as shown below.



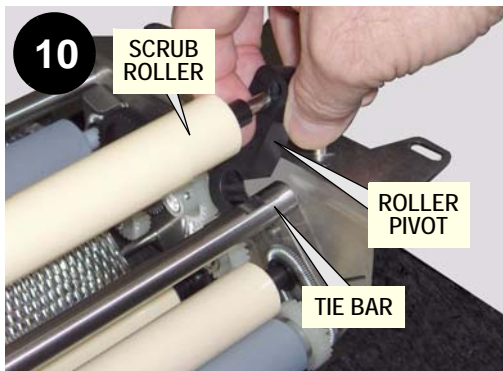
7. Install the **IDLER ROLLER** shown below.



8. Install the **BOTTOM GUIDE** as shown below.



9. Flip over the rack, set it in place in the front bay in the DPX 4, replace the mounting nuts, and tighten the captive fasteners.
10. Snap the left and right roller pivots onto the tie bar, set the scrub roller into the roller pivots (see below), and then lower the pivot rollers and scrub roller.



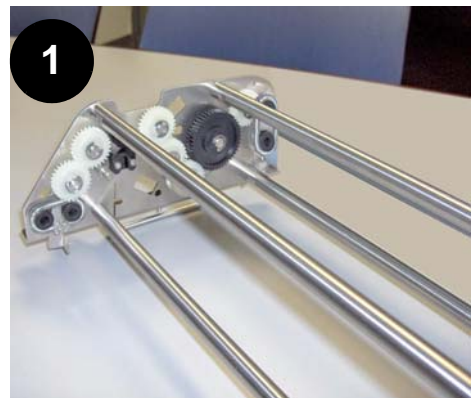
Installing the Activator Rack Rollers, Racks, and Guides

Steps for installing the rollers and guide are presented below. The same basic technique is used to install each roller and the guide.

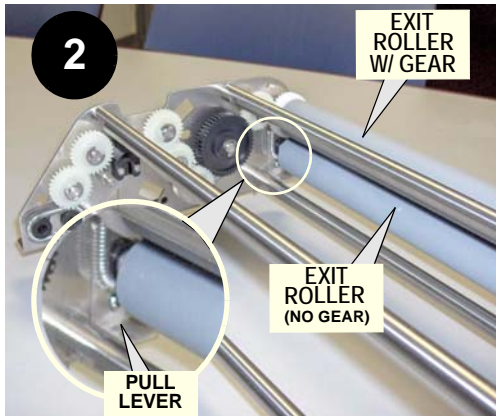
- First, insert the spring-loaded end of the roller/guide into its bushing on **right** side of the rack.
- Next, compress the roller/guide into the bushing, align the opposite of the roller/guide with its bushing on the **left (gear train)** side of the rack.
- Finally, gradually relax compression to seat the roller/guide in the bushing.

When you install a roller pair, use the pull lever to spread the rollers apart to get the gears to mesh.

1. Lay the activator rack on a table with the bottom facing up, as shown below.



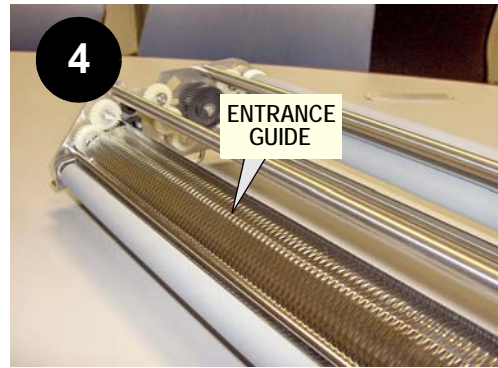
2. Install the **EXIT ROLLERS** as shown below. If the gear at the end of the top roller won't mesh with the mating roller, pull down the **PULL LEVER**, move the roller as needed until the gears mesh, and then release the **PULL LEVER**.



3. Install the **ENTRANCE ROLLERS** as shown below. If the gear at the end of the roller won't mesh with its mating gear, pull down the **PULL LEVER**, adjust the roller until the gears mesh, and then release the **PULL LEVER**.



4. Install the **ENTRANCE GUIDE** as shown below.



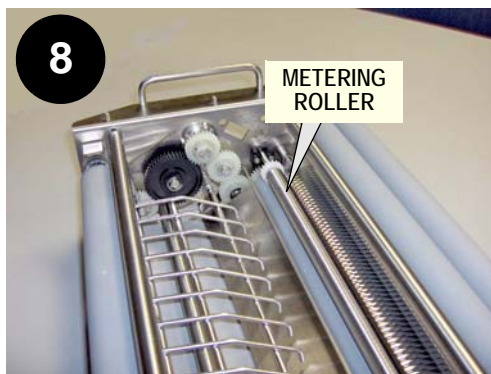
5. Install the **DOCTOR BLADE** as shown below.



6. Install the **BACK-UP ROLLER** as shown below ,



8. Install the **METERING ROLLER** as shown below.



7. Turn the rack over so that the top is facing up, and then install the **WIRE GUIDE** as shown below.



9. Install the **INLET GUIDE** as shown below.



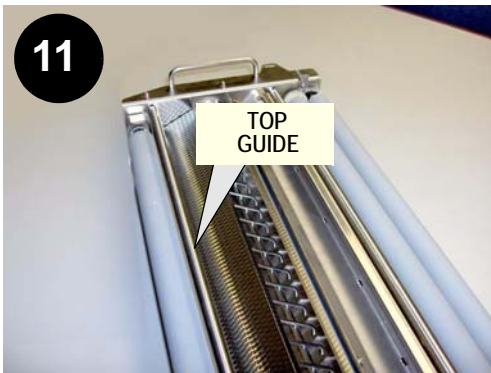
- 10.** Install the **HOPPER ASSEMBLY** as shown below.



- 12.** Install the **SUPPLY PIPE ASSEMBLY** as shown below.



- 11.** Install the **TOP GUIDE** as shown below.



- 13.** Install the **INLET GUIDE** as shown below.



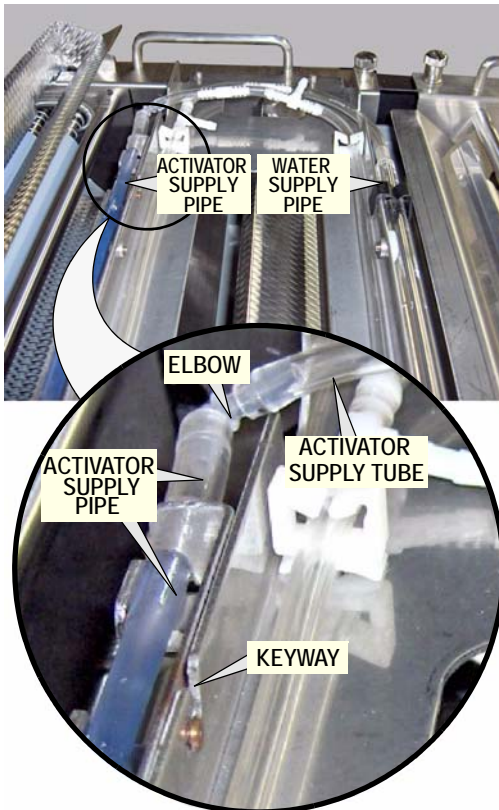
- 14.** Set the rack in place in the rear bay in the DPX 4, replace the mounting nut, and tighten the captive fasteners.

Cleaning the Activator Supply Pipe

The activator supply pipe on the supply mount should be cleaned on a regular basis or whenever the drip holes in the pipe become clogged with hardened activator.

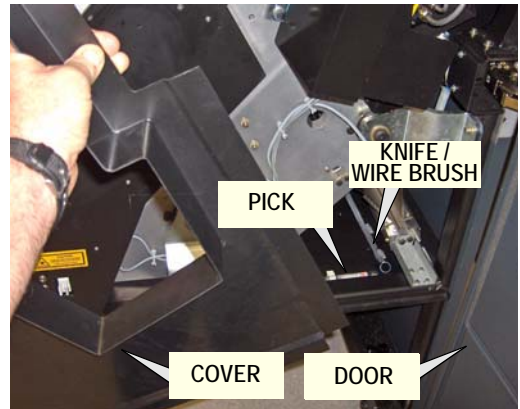
1. At each end of the activator pipe, pull the elbow (see below) out of the activator pipe.
2. Remove the supply pipe assembly by sliding it toward the activator supply tube and then up and out of the two keyways. (See below.)

Supply Pipe Assembly



3. On the right side of the platesetter, pop open the door, remove the cover, and then remove the pick and the knife/wire brush that are clipped to the frame. (See below.)

Cleaning Tools



4. Using the pick, remove hardened activator from the drip holes in the activator supply pipe, and then use the wire brush to remove hardened activator from the interior surface of the pipe.
5. Rinse the interior of the pipe with clean water. If necessary, repeat steps 4 and this step to remove all traces of hardened activator from the holes and the pipe.
6. Set the pipe back in place in the supply mount assembly and plug the supply tube elbows back into the pipe.
7. Put the pick and the knife/wire brush back into their clips on the frame.

Note: As a rule, the water supply pipe does not require cleaning, so leave it in place.

Replacing the Diffusion and Anti-backflow Sheets

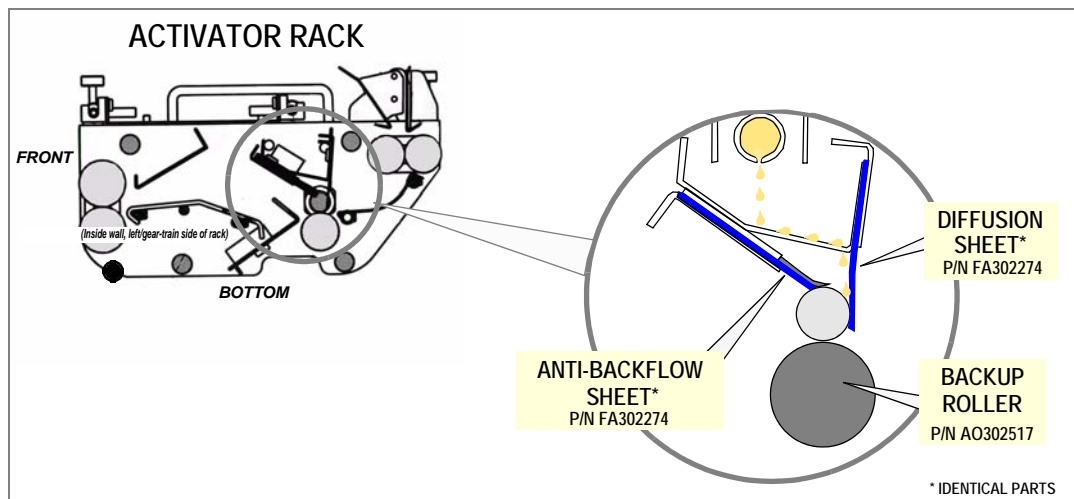
The diffusion sheet and anti-backflow sheet on the activator coater assembly (see below) should be replaced every 12 months.

1. Pull out the processor.
2. Remove the activator tank cover.
3. Remove the activator coater assembly. (Refer to *“Installing the Activator Rack Rollers, Racks, and Guides”* on page 7.40.
4. Remove the old diffusion and anti-backflow sheets and replace with the new.
5. Replace the activator coater assembly. (Refer to *“Installing the Activator Rack Rollers, Racks, and Guides”* on page 7.40.
6. Replace the activator tank cover.

Replacing the Backup Roller

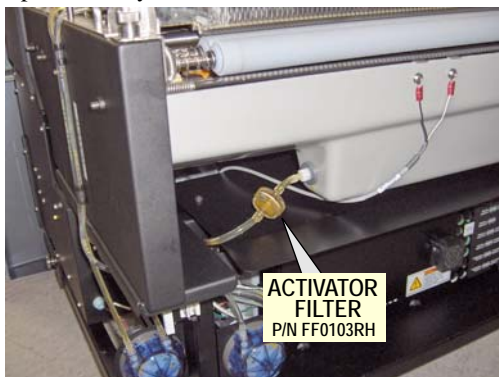
The activator rack backup roller (see below) should be replaced every 12 months.

1. Pull out the processor.
2. Remove the activator tank cover.
3. Remove the backup roller (Refer to *“Installing the Activator Rack Rollers, Racks, and Guides”* on page 7.40.
4. Install the new backup roller, (Refer to *“Installing the Activator Rack Rollers, Racks, and Guides”* on page 7.40.
5. Replace the activator tank cover.



Replacing the In-line Activator Filter

The in-line activator filter is located at the back of the processor unit (see below). The filter should be replaced every 12 months.



Replace the filter as follows.

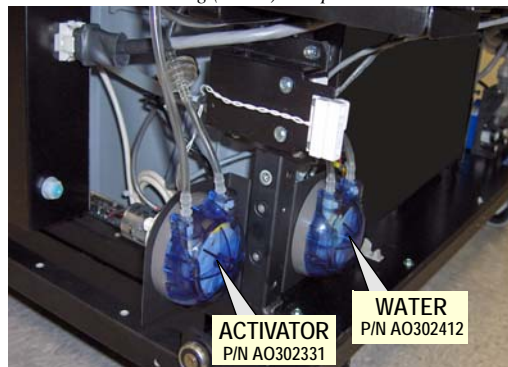
1. Power down the platesetter and pull out the processor.
2. Insert an open jaw hose clamps over the line leading into filter and the line leading out of the filter.
3. Unplug the clamped lines from the old filter and then plug the lines into the new filter.
4. Remove the clamps.
5. Roll the processor back into the platesetter.

Replacing a Supply Pump

Note: Wear protective gloves during this operation. Also, you will need 2 small open-jaw clamps (ECRM HB3247RH), and either a rag, sponge, or small pan.

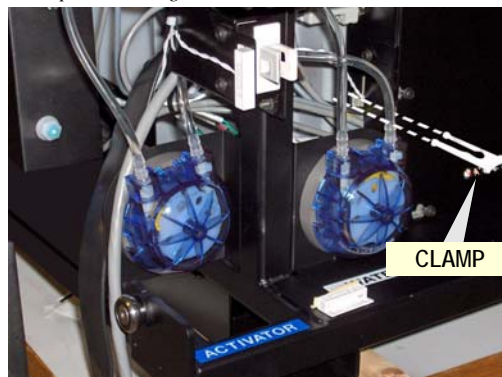
1. Pull out the processor and locate the activator and water supply pumps. They are at the back of the processor, on the right side (see below).

Activator and Cleaning (Water) Pumps



2. Insert open jaw clamps over the input and output hoses of the pump to be changed (see the next figure).

Clamps and Fittings



3. Set the rag, sponge or pan on the frame to catch fluid dribble that will occur when you perform the next step.
4. Disconnect the input and output fittings/lines from the pump.

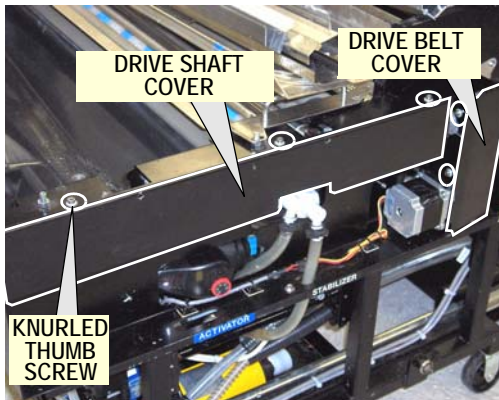
5. Turn the pump counterclockwise and remove it from the processor.
6. Install the new pump.
7. Connect the input and output fittings/lines to the pump.
8. Remove the clamps and the rag, sponge or pan.
9. Roll the processor back into the platesetter.

Lubricating the Worm Gears

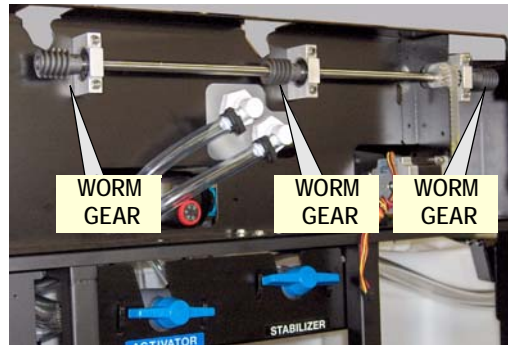
The worm gears for the drive mechanism should be lubricated every 12 months. The recommended lubricant is ECRM P/N 405-110-000.

Step 1. Power down the platesetter and pull out the processor.

Step 2. On the left side of the processor, remove the Drive Shaft Cover (3 knurled thumb screws) and the Drive Belt Cover (2 knurled thumb screws) shown below.



Step 3. Locate the three worm gears shown below.



Step 4. Apply a liberal coating of 405-110-000 grease all around each of the worm gears.

Step 5. Replace the drive shaft cover and the drive belt cover.

Chapter 8 – Technical Specifications

In this section:

- Platesetter specifications DPX 4, page 49
- Media specifications, page 50
- Processor specifications, page 50.

PLATESETTER SPECIFICATIONS DPX 4	
Exposure Technology	Internal drum
Max. Plate Format	680 x 754 mm
Min. Plate Format	305 x 305 mm
Optional Standard Punches	Bacher 220 mm. Plate punch Bacher 425 mm. Plate punch Bacher 220/425 mm. Plate punch The gripper margin is imageable
Custom Punch	Punch is in one side of the plate only
Laser Type	Red laser diode, 658 nm., min.10 mW
Resolution	1200 - 3000 dpi in steps of 1
Spinner Speed	60.000 RPM
Performance	Approximately 28 full-format plates per hour @2540 dpi
Integrated Processor	Actuator coater with stabilizer bath
Replenish Capacity	Min. 2 full size rolls of material
Waste Capacity	Min. stabilizer and actuator tank contents + full replenish capacity
Physical Dimensions (HxWxD)	Approximately 1.100 x 1.300 x 1.050 mm
Weight	Approximately 500 kg
RIP Interface	USB 2.0
User Interface	DotManager software on the RIP PC
Power Requirements	220 -240 Volt, 50/60 Hz, 16 A

Working Environment	40 - 70% RH, non-condensing
Temperature	18 - 25 degrees C
Max Temperature Change	2 degrees C/hour, +/- 1 degree C/hour
Installation Requirements	80 cm wide door

MEDIA SPECIFICATIONS

Media	2 media rolls (2 is optional)
Media Type	DotPrint / Mitsubishi Silver Digiplate, with polyester base material
Thickness	0.2 mm/8 mill FR/FRM on media widths from 305 - 750 mm
Core Size	6"/152.4 mm (Specification 1620)
Media Width, Large	305 - 754 mm
Media Width, Medium	305 - 550 mm
Output Tray Capacity	40 maximum format plates 0.2 mm media

PROCESSOR SPECIFICATIONS

Tank Capacity Activator	Approximately 1.3 liters
Tank Capacity Stabilizer	Approximately 5.8 liters
Activator Coating Rate (ml/m²)	0.33 ml/m ² nominal
Maximum Replenishment Refill Rate, Activator and Stabilizer	200 ml/min.
Stabilizer Circulation Rate	3.5 liters/min.
Heater for Chemicals	Heating element, activator, 150 watt cartridge Heating element, stabilizer, 300 watt in-line (Auxiliary Thermal Control hardware only)
Activator Temperature Control	25-40°C (33°C nominal)
Warm-up Time	Approximately 20 min. (nominal settings in an 18°C environment)
Replenishment Containers	3 x 10 liters, including water

Waste Tank Capacity	20 liters to full sensor; 30 liters full.
Waste Tank Pump Rate	10 liters/min.
Dip to Nip distance, Activator	Approximately 390 mm. Coating roller to nip 140 mm
Dip to Nip distance, Stabilizer	Approximately 200 mm
Plate Advance Speed	15 mm/sec. at 9.6 sec. development time
Drying System Heaters	2.000 Watts
Temperature Range Settings	30°C - 50° C drying system

Chapter 9 – Troubleshooting

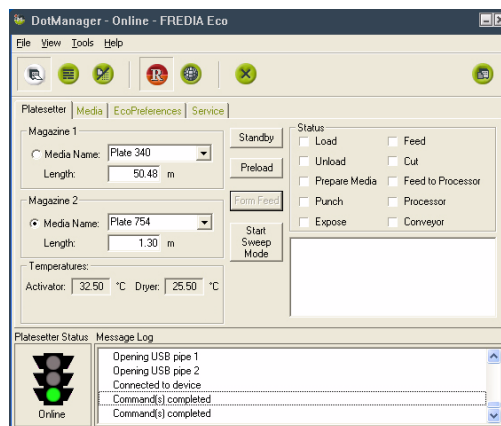
Troubleshooting Table

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Operator must continually increase the flow index setting to maintain plate quality.	Clogged/dirty in-line activator filter f.	Replace the filter. See <i>“Replacing the In-line Activator Filter”</i> on page 7.46
Plate skewing/scratching.	Dirty rollers and/or guides.	Clean the rollers and guides. See <i>“Cleaning the Processor”</i> on page 7.32
Non-uniform plate development.	Activator supply pipe is dirty.	Clean the activator supply pipe. See <i>“Cleaning the Activator Supply Pipe”</i> on page 7.44
Online Processor General Error 2320 reported.	Loose cable connection.	Ensure all cable connections are tight.

Display Messages

The system monitors its own operation and continually displays messages in the Status and Log windows as it does.

The table on the next page describes some of the messages, including many of particular value for troubleshooting.



Display Messages

INFORMATION

Message	Remarks
Processor Busy, Processing	Processor is running the power up cycle or a plate is being processed
Processor Busy, Feeding	Processor is running the power up cycle or a plate is being fed into the processor
Eco Processor Standby, Safe To Power Off	The processor is now in standby and can be safely powered off

WARNINGS

Message	Remarks
Processor Info, Activator Supply Pump Service	Activator supply pump service recommended
Processor Info, Cleaning Supply Pump Service	Cleaning supply pump service recommended
Processor Info, Refilling Activator	Activator tank is being refilled automatically
Processor Info, Refilling Stabilizer	Stabilizer tank is being refilled automatically
Processor Info, Dev/Act Repl. Low	The Activator Replenish Tank is low
Processor Info, Fix/Stab Repl. Low	The Stabilizer Replenish Tank is low
Processor Busy, Activator Temperature	The activator temperature is more than 1 degree below the setpoint
Processor Busy, Stabilizer Temperature	The stabilizer temperature is less than the setpoint

ERRORS

Message	Remarks
Processor Fail, Act temp sensor error	<p>An error is reported when any of the following conditions are detected:</p> <ul style="list-style-type: none"> • The activator temperature read less than 0.5 Deg. C (Hardware fault) • The temperature was greater than 43 Deg. C (Overlimit) • The temperature exceeded the setpoint by more than 3 degrees (FW control loop failed)
Processor Fail, Stab temp sensor error	The stabilizer temperature read less than 0.5 Deg. C (Hardware fault)
Processor Fail, Dryer temp sensor error	The dryer temperature read less than 0.5 Deg. C (Hardware fault)
Processor Fail, Eco Hardware Interface error	The low level driver failed to initialize resulting error codes range from 2320 through 2324
Processor Error, Interlock	The processor interlock has been detected resulting error code 1901
Processor Error, Activator Level Low	The activator tank AND the activator replenish tank are both low resulting error code 2001
Processor Error, Stabilizer Level Low	The stabilizer tank AND the stabilizer replenish tank are both low resulting error code 2003
Processor Busy, Waste container full	The waste tank is full and must be emptied
Processor Error, Water Level Low	The water supply tank is empty

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